

ABSTRACT

An ion source device includes an ion source having a filament for emitting thermoelectrons; a current measuring device for measuring current flowing through the filament, a
5 voltage measuring device for measuring voltage across the filament, a resistance operation device for computing a resistance value of the filament by using the current and the voltage measured by the current and voltage measuring devices, and a prediction operation device for computing a time till
10 the application limits of the filament or a time left till the application limits of the filament.